UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,465	10/07/2005	Takao Harada	278363US0PCT	2247

22850 7590 05/02/2008

OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER	
ZHU, WEIPING	

ART UNIT	PAPER NUMBER
1793	

NOTIFICATION DATE	DELIVERY MODE
05/02/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary	Application No.	Applicant(s)	
	10/552,465	HARADA ET AL.	
	Examiner	Art Unit	
	WEIPING ZHU	1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 April 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) *14-21* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *3/14/2008 and 10/7/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Status of Claims

1. Claims 1-13 are currently under examination.

Applicant's election with traverse of Invention I, Claims 1-13, drawn to a method for producing upgraded coal, in the reply filed on February 25, 2008 is acknowledged. The traverse is on the ground(s) that no adequate reasons and/or examples have been provided to support a conclusion of patentable distinctiveness between the identified groups; also, it has not been shown that a burden exists in searching the claims of the three groups. This is not found persuasive. As stated in the Office action dated January 25, 2008, the inventions listed as I-III do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: the common technical feature in all groups is the upgraded coal. This element cannot be a special technical feature under PCT Rules 13.2 because the element is shown in the prior art. Brink et al. (US 4,045,187) discloses an upgraded coal (abstract), which is substantially identical to the upgraded coal. Inventions I-III lack the same or corresponding special technical features. Therefore unity of invention is lacking and restriction is appropriate.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Brink et al. (US 4,045,187).

With respect to claims 1 and 2, Brink et al. ('187) discloses a method for producing coal for metallurgy by extracting coal with an organic solvent, the method comprising: preparing a raw material slurry by mixing the coal with the organic solvent; heating the raw material slurry to extract a soluble component of the coal in the organic solvent; sendimenting an insoluble component of the coal by filtration to separate the soluble coal component containing an extracted coal and the insoluble coal component containing a residual coal; and removing the solvent by distillation (col. 1, line 1 to col. 2, line 8).

With respect to claim 10, Brink et al. ('187) discloses the organic solvent is recovered by distillation and recycled (col. 1, lines 24-26).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 3-7, 9 and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brink et al. ('187) as applied to claim 1 above.

With respect to claim 3, Brink et al. ('187) does not disclose the second solvent removing step as claimed. However it is well held that in general, the transposition of

process steps or the splitting of one step into two, where the processes are substantially identical or equivalent in terms of function, manner and results, was held to be not patentably distinguish the processes. *Ex parte Rubin* 128 USPQ 159 (PO BdPatApp 1959). In the instant case, Brink et al. ('187) discloses that the solvent is removed by distillation (col. 1, lines 24-29). It would have been obvious to one of ordinary skill in the art at the time the invention was made to remove the solvent in one or two or more steps as desired in order to meet requirements of solvent refined coal for different applications.

With respect to claims 4 and 5, Brink et al. ('187) discloses compounding the extracted coal and the residual coal to produce an upgraded coal with less than 12% by weight of the residual coal (col. 1, line 55 to col. 2, line 8), which overlaps the claimed range. A prima facie case of obviousness exists. See MPEP 2144.05 I. It would have been obvious to one of ordinary skill in the art at the time the invention was made to select the claimed range within the disclosed range of Brink et al. ('187) with expected success, because Brink et al. ('187) discloses the same utility over the entire disclosed range.

With respect to claims 6 and 7, Brink et al. ('187) discloses the heating temperature and time ranges in the extracting step are 350-500^{o} C and 15-120 minutes respectively (col. 1, lines 10-29). The ranges of Brink et al. ('187) overlap the claimed ranges respectively. A prima facie case of obviousness exists. See MPEP 2144.05 I.

With respect to claim 9, Brink et al. ('187) discloses the organic solvent is a aromatic compound with a boiling temperature between 200-450° C (col. 3, lines 16-22), which reads on the claimed organic solvent.

With respect to claim 11, Brink et al. ('187) discloses the organic solvent may or may not be hydrogenated (col. 2, lines 51-59).

With respect to claim 12, Brink et al. ('187) discloses recovering the organic solvent comprising vacuum distillation (col. 4, lines 22-25).

With respect to claim 13, it is a product-by-process claim. Even through product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. Brink et al. ('187) discloses an upgraded coal, which reasonably appears to be only slightly different than the respective claimed product in the product-by-process claim. A rejection based on section 103 of the status is eminently fair and acceptable. See MPEP 2113.

4. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brink et al. ('187) as applied to claim 1 above and in view of Miller (US 4,617,105).

With respect to claim 8, Brink et al. ('187) does not disclose the claimed features. Miller ('105) discloses extracting coal in a nitrogen atmosphere at atmospheric or elevated pressures (col. 4, line 67 to col. 5, line 7). The pressure range of Miller ('105) overlaps the claimed range. A prima facie case of obviousness exists. See MPEP 2144.05 I. It would have been obvious to one of ordinary skill in the art at the time the invention was made to extract coal in a nitrogen atmosphere at atmospheric or elevated pressures as disclosed by Miller ('105) in the process of Brink et al. ('187) in order to

improve the process for thermal solvent refining coal as disclosed by Miller ('105) (col. 3, lines 5-15).

Conclusion

5. This Office action is made non-final. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Weiping Zhu whose telephone number is 571-272-6725. The examiner can normally be reached on 8:30-16:30 Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roy King/
Supervisory Patent Examiner, Art Unit 1793

WZ

4/18/2008